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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/849,981

05/20/2004

Ernst Friedrich Ach

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8688

50659

7590

07/18/2006

BUTZEL LONG  
DOCKETING DEPARTMENT  
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SUITE 200  
BLOOMFIELD HILLS, MI 48304

EXAMINER

MATTHEWS, TERRELL HOWARD

ART UNIT

PAPER NUMBER

3654

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/849,981

Applicant(s)

ACH ET AL.

Examiner

Terrell H. Matthews

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 4/24/2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

Applicant's arguments with respect to claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7,13-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda (WO 99/43589) in view of Kinoshita (US-5891561) in further view of Danhauer (US 2002/0098935).

Referring to claims 1-6,9-10,13-14. Baranda discloses an "Elevator System Having Drive Motor Located Between Elevator Car and Hoistway Sidewall" as claimed. See Figs. 1-8 and respective portions of the specification. Baranda further discloses a drive motor (42) mounted at a head of an elevator shaft and having a drive pulley; an elevator car (16) movable in the elevator shaft; a counterweight (48) movable in the elevator shaft and arranged laterally of the elevator car (See at least Pg. 2 – Pg. 3 l. 17 & at least Fig. 2). Baranda further discloses a flat-belt-like support means supporting the

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elevator car by under looping and engaging the drive pulley, Baranda does not disclose the support means being a wedge-ribbed belt having a running surface facing the drive pulley and a plurality of ribs and grooves formed with an angle in the range of 80 to 100 degrees in the running surface and extending in parallel in a longitudinal direction of the support means. Kinoshita discloses a "Power Transmission Belt With Load Carrying Cord". See Figs. 1- 3 and respective portions of the specification. Kinoshita further discloses a wedge-ribbed belt (10) with ribs and grooves being one of triangular-shaped and trapezium-shaped in cross section (See at least Col. 3 l. 12-30 and at least Fig. 1). Danhauer discloses a belt (10) with a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction on the support means (See Sect. 0017 & Figs. 1-2). Furthermore, Danhauer discloses that the belt (10) is provided with a plurality of transverse grooves (34) (See at least Sect. 0025) and that the grooves are provided at an inclined angle between 20° and 85°. Additionally, it should be noted that the belt (10) has at least two wedge-ribbed belt strands arranged in parallel (See Figs. 1-2). It would have been obvious to a person of ordinary skill in the art to modify the apparatus of Baranda to include the teachings of Danhauer and provide a wedge-ribbed belt with a plurality of ribs and grooves formed in the running surface as well as transverse grooves and ribbed strands formed at an angle between 80 to 100 degrees as taught by Kinoshita and Danhauer so that the belt could provide better traction, increased flexibility, and a higher load capacity.

Referring to claim 7. Baranda does not disclose that the drive pulley has an external diameter in a range of 70 to 100 millimeters. It would have been obvious to a

person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda to include drive pulleys that were in the range of 70 to 100 millimeters so that greater torque and lifting capacity could be achieved.

Referring to claim 9-10. Baranda discloses that the drive motor and drive pulley are mounted in a space which lies between one side of the elevator car, when the elevator car is standing in an uppermost position in the elevator shaft, and an adjacent wall of the elevator of the elevator shaft and an axis of the drive pulley is arranged horizontally and parallel to the one side of the elevator car (See Fig. 2). Baranda further discloses a belt connected at one end of the side of the elevator car at a first support means fixing point (104), which extends from the first support means fixing point vertically upwards to a side which faces the elevator car, of a periphery of the drive pulley, loops around the drive pulley by 180 and then runs vertically to a second support means fixing point (102) at the counterweight (See Fig. 3). Baranda does not disclose that the belt connected at one end of the elevator is a wedge-ribbed belt; it would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda an implement an wedge-ribbed belt as taught by Kinoshita for reasons as discussed above.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda in view of Kinoshita (US-5891561) in further view of Danhauer (US 2002/0098935) as applied to claims 1-7, 9-10, 13-14 as advanced above and in further view of Bauer (US-2002/0185338).

Referring to claim 8. Baranda does not disclose that the drive motor and drive pulley are mounted on a drive bracket attached to at least one guide columns. Bauer discloses a "Rope Elevator" as claimed. See Figs. 1-4 and respective portions of the specification. Bauer further discloses that a drive motor (14) and a drive pulley (13) are mounted on a bracket attached to at least one of the guide columns (See at least Sect. 0017 & at least Fig. 2). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Bauer to include the teachings of Bauer and provide a bracket so that the drive motor and drive pulley could be mounted together so that when forces were exerted as a result of the elevator they would not be loaded on the walls.

Claims 11-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baranda in view of Kinoshita (US-5891561) in view of Danhauer (US 2002/0098935) as applied to claims 1-7, 9-10, 13-14 as advanced above and in further view of Mori (US-2002/0112924).

Referring to claims 11-12. Baranda does not disclose a belt transmission means for coupling the drive motor to the drive pulley or that the belt transmission means includes at least one cogged belt and a wedge-ribbed belt coupling the drive motor to the drive pulley. Mori discloses a "Elevator Apparatus" as claimed. See Figs. 1-22 and respective portions of the specification. Mori further discloses a belt transmission means

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coupling the drive motor (52) to the drive pulley (51) (See Sect. 0040 & Figs. 1,19).

Kinoshita discloses a wedge-ribbed belt (10) with ribs and grooves being one of triangular-shaped and trapezium-shaped in cross section (See at least Col. 3 l. 12-30 and at least Fig. 1). Danhauer discloses a belt (10) with a plurality of ribs and grooves formed in the running surface and extending in parallel in a longitudinal direction on the support means (See Sect. 0017 & Figs. 1-2). It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify the apparatus of Baranda in view of Kinoshita, Danhauer and Mori to provide a belt transmission that coupled the drive motor and drive pulley that consisted of at least one of a cogged belt and a wedge-ribbed belt. It would have been obvious to use a cogged and wedge-ribbed belt so that the elevator could benefit from an increased load capacity and better traction.

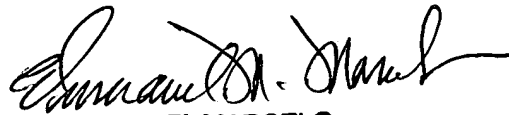
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrell H. Matthews whose telephone number is (571)272-5929. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kathy Matecki can be reached on (571) 272-6951. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

THM

  
**EMMANUEL MARCELO**  
**PRIMARY EXAMINER**